



UNITED
TECHNOLOGIES
AUTOMOTIVE

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IOWA SECTION

Engineered Systems Division

August 10, 1990

Via Overnight Mail

Jim Thayer
Environmental Specialist
Solid Waste Section
Iowa Dept. of Natural Resources
Wallace State Office Building
Des Moines, IA 50319

Subject: Sheller-Globe Corp. Keokuk Plant Site Assessment Investigation

Dear Mr. Thayer:

Enclosed please find one copy of the subject report, as prepared by PCS. In accordance with the approved workplan, soil-vapor was sampled at 28 locations and the four existing groundwater monitoring wells were sampled. Figure 4 from the report (Attached) shows the soil-vapor sampling locations and isoconcentration lines. The soil-vapor results indicate that the contamination is confined to the fill area east of the excavation and extends north/northwest of the mixing building. The locations south and west of the fill (in the slope or till) were generally non-detect. The groundwater data indicates a northwest flow direction. Static Water Level anomalies in MW-1, MW-2 and MW-4 may be due to surface infiltration from the excavation and the close proximity of these wells. No free product was discovered in any of the wells. All four wells showed elevated VOC concentration. However, VOC levels decreased significantly (more than one order of magnitude) to the west of the excavation (MW-3).

Based on the results of this investigation, the following recommendations have been developed:

- (1) Install three 2-inch diameter perimeter groundwater monitoring wells at the site. The purpose of these wells is to obtain soil and groundwater samples for analytical testing to further evaluate the lateral and vertical extent of the suspect plume.

Since the area north and northwest of the site has not been adequately defined, we propose to conduct a series of step-off borings, starting at soil-vapor sample locations SV-24 and SV-25, and proceeding towards the north on an approximate 30-foot spacing. In addition, we propose to conduct a series of step-off borings starting at soil-vapor sample locations SW-17 and proceeding towards the northwest on an approximate 30-foot spacing. Based on field screening results, two perimeter monitoring wells will be installed at the north and northwest edges of the plume. A background well will be installed upgradient of the excavation area. Anticipated locations of the step-off borings and wells are presented in Figure 6 of the report (Attached).



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Page 2
August 10, 1990

PCS Keokuk Report

- (2) Install one 4-inch diameter groundwater monitoring well in the proximity of soil-vapor sample location SV-15 to further evaluate the detection of elevated VOC concentrations in this area. A 4-inch well at this location may be utilized for potential remediation activities.
- (3) Perform in-site hydraulic permeability testing (slug test method) at several wells on the site. The objective of these tests would be to provide data for the development of potential remedial activities.

I trust this information meets your requirements. Please notify me, as soon as possible, if the proposed scope of work is acceptable, so that a workplan can be submitted for approval. If you have any questions, please call me at (313) 237-3627.

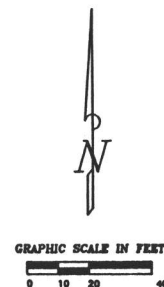
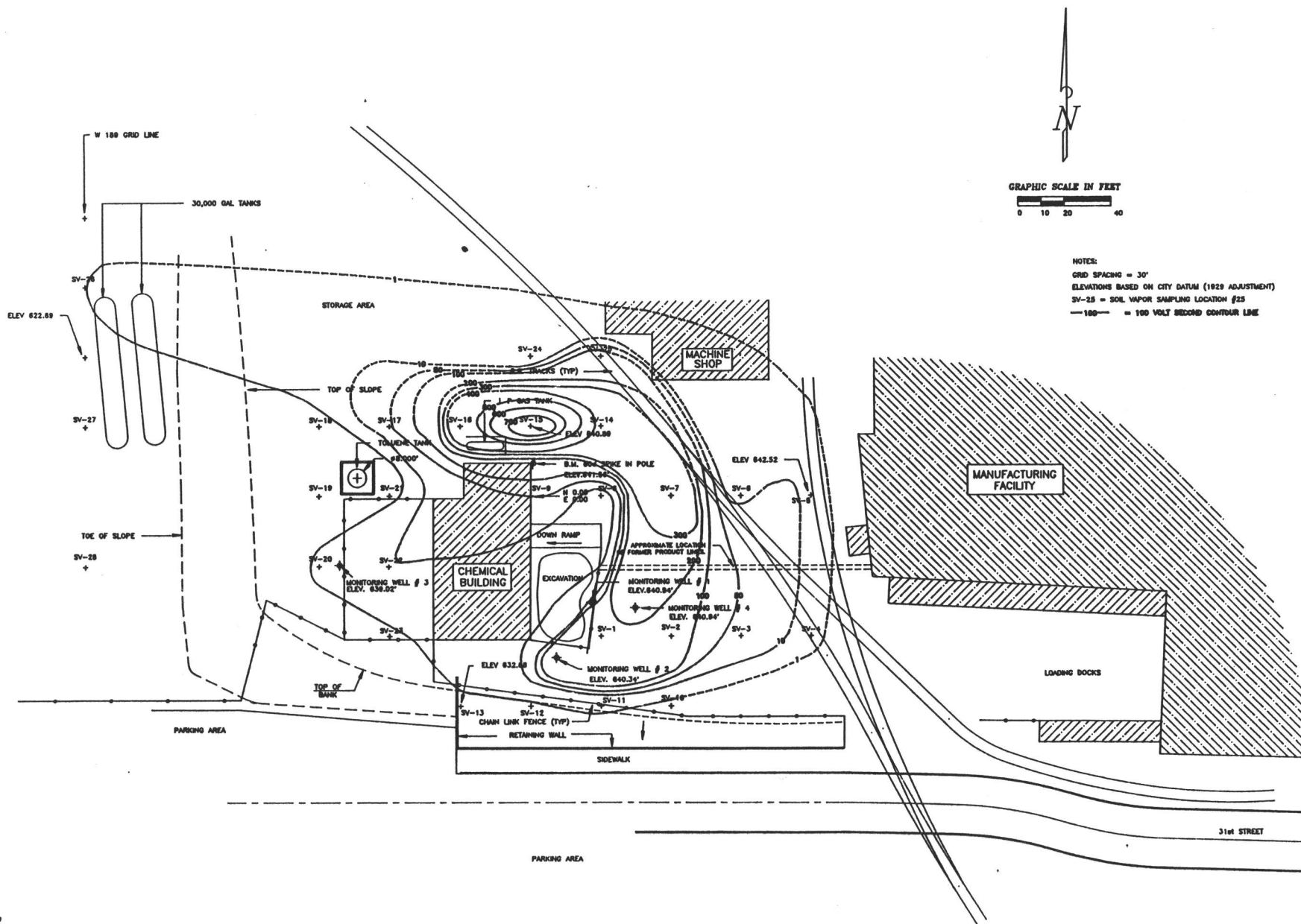
Sincerely,

UNITED TECHNOLOGIES AUTOMOTIVE, INC.
Engineered Systems Division



Stephen J. Ridella, P.E.
Senior Environmental Administrator

/ts
Enclosure/Attachments



NOTES:
 GRID SPACING = 30'
 ELEVATIONS BASED ON CITY DATUM (1929 ADJUSTMENT)
 SV-25 = SOIL VAPOR SAMPLING LOCATION #25
 ---100--- = 100 FOOT SECOND CONTOUR LINE

bcc: E. Mahon (w/o encl.)
P. Perrelli
R. Sargeant
G. Sweeney (w/o/encl.)
B. Vandersall